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NOMENCLATURAL PROPOSAL PHYTOSOCIOLOGICAL NOMENCLATURE

Request (3) for a binding decision on the valid publication of the names *Xerobromion* and *Mesobromion* in Zoller 1954

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Abstract

The two alliances *Xerobromion* and *Mesobromion* derive from the change of rank of two suballiances of the *Bromion* Koch 1926 (*Xerobromenion* and *Mesobromenion*). Zoller (1954a) recognized that those suballiances could not belong to the same alliance (i.e. *Bromion*) and treated them as two separate alliances, although some doubts can be raised that he did not clearly adopted them at the rank of alliance. Zoller's work having been overlooked, other authors proposed subsequently to rise the *Xerobromenion* and *Mesobromenion* to the rank of alliances. Accordingly, the alliances *Xerobromion* and *Mesobromion* are often cited with author citations other than Zoller 1954. The present paper requests a binding decision on the valid publication of the names *Xerobromion* and *Mesobromion* in Zoller (1954a).

Abbreviations: EVC = EuroVegChecklist; ICPN = International Code of Phytosociological Nomenclature.

Keywords

Artemisio albae-Brometalia erecti, *Bromion erecti*, *Festuco-Brometea*, ICPN, phytosociological nomenclature, syntaxonomy

Introduction

The name *Mesobromion erecti* (Br.-Bl. et Moor 1938) Oberd. 1957 was recently proposed as *nomen conservandum* against the name *Bromion erecti* W. Koch 1926 (Proposal 22; Theurillat et al. 2017). On the other hand, Terzi et al. (2016, pp. 313–314) considered that earlier than Oberdorfer (1957), Zoller (1954a) had validly raised the suballiances *Mesobromenion* and the *Xerobromenion* to the alliance level. This issue concerns a controversial interpretation of the article 3b of the ICPN (Theurillat et al. 2021). A binding decision (definition XIV of ICPN) would be useful to resolve the different interpretations regarding the first valid publication of the names *Mesobromion* and *Xerobromion*. Therefore, the present request can be considered an addition to Proposal 22, presented by Theurillat et al. (2017).

Xerobromion (Braun-Blanquet et Moor 1938) Zoller 1954 and *Mesobromion* (Braun-Blanquet et Moor 1938) Zoller 1954

The two suballiances *Xerobromenion* and *Mesobromenion* were originally proposed by Braun-Blanquet and Moor (1938) to separate the xerophilous associations from the meso-xerophilous ones within the alliance *Bromion* Koch 1926. Terzi et al. (2016) suggested to retain the name *Xerobromion*

PENSOFT

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(Braun-Blanquet et Moor 1938) Zoller 1954 as the correct name at the alliance level over the later name *Xerobromion* (Braun-Blanquet et Moor 1938) Moravec in Holubet al. 1967 that was published in overlooking Zoller's publication (J. Moravec to J.-P. Theurillat, pers. comm.). On p. 314, Terzi et al. (2016) typified the *Xerobromion erecti* (Braun-Blanquet et Moor 1938) Zoller 1954 with the association *Xerobrometum rhenanum* Braun-Blanquet in Braun-Blanquet et Moor 1938. [The earliest available name for the illegitimate *Xerobrometum rhenanum* would be the *Cerastio-Brometum* Zoller 1954.] Zoller's work having been overlooked, the name *Xerobromion erecti* is mostly referred to Moravec in Holub et al. 1967 (e.g., Royer 1991; Pott 1992; Mucina et al. 1993; Biondi et al. 1995; Rivas-Martínez et al. 2011). However, the author citation '*Xerobromion erecti* (Braun-Blanquet et Moor 1938) Zoller 1954' is retained in Theurillat et al. (1995), and in the EVC (Mucina et al. 2016), and it was selected as the holotype of the order *Artemisio albae-Brometalia erecti* Ubaldi ex Dengler et Mucina in Mucina et al. 2009 (Mucina et al. 2009, p. 269) in the form '*Xero-Bromion erecti* Zoller 1954' [recte: *Xerobromion* (Braun-Blanquet et Moor 1938) Zoller 1954]. However, the *Artemisio albae-Brometalia erecti* Ubaldi ex Dengler et Mucina in Mucina et al. 2009 is a superfluous name (Art. 29c) for the validly published *Artemisio albae-Brometalia erecti* (Biondi, Ballelli, Allegrezza et Zuccarello 1995) Ubaldi 1997. Since the name by Dengler and Mucina includes Ubaldi's name, it is automatically typified by the type of Ubaldi's name (Art. 18b), namely the '*Xerobromion* (Br.-Bl. and Moor 1938) Moravec in Holub et alii 1967'.

The situation is different with the name *Mesobromion erecti* (Braun-Blanquet et Moor 1938) Zoller 1954 that was almost completely overlooked. In this case, the correct name according to the rules (Art. 24) should be *Bromion erecti* Koch 1926. However, that name has been proposed as a *nomen ambiguum* (see Theurillat et al. 2017). Consequently, Theurillat et al. (2017) proposed to retain the name *Mesobromion erecti*, yet not the earlier name *Mesobromion erecti* (Braun-Blanquet et Moor 1938) Zoller 1954 but the later, independently published *Mesobromion erecti* (Braun-Blanquet et Moor 1938) Oberdorfer 1957, which has been used by the majority of authors.

However, there could be a doubt about the validity of Zoller's names, an issue raised by W. Willner in Theurillat et al. (2017, p. 385). That is, Art. 3b could apply because, albeit explicitly proposed by Zoller, the names might not be clearly adopted by the author.

The reasoning to consider Zoller's names as validly or invalidly published were given in Terzi et al. (2016) and Theurillat et al. (2017). As pointed out by Terzi et al. (2016, p. 313), Zoller (1954a, 34–36), in a critic of the syntaxonomy of the order *Brometalia* in Braun-Blanquet and Moor (1938), found great difficulties in considering the "*Xerobromion*" and the "*Mesobromion*" as two suballiances of the same alliance, namely the *Bromion* sensu Braun-Blanquet and Moor (1938), due to the important floristic, ecological, chorological, and structural differences between them: "*Xerobromion und Mesobromion sind sowohl in floristischer und arealtypischer als auch in ökologischer Hinsicht so verschieden, daß sie nicht in einer höheren Einheit zusammengefaßt werden können*" [*Xerobromion* and *Mesobromion* are so different in floristic and chorological as well as in ecological respect that they can not be combined in one higher unit] (Zoller 1954a, p. 293). Therefore, Zoller (1954a, p. 36) refused to consider the two suballiances as belonging to the same alliance, and instead he implicitly retained the two syntaxa, *Xerobromion* and *Mesobromion*, as two separate alliances: "*Einer Vereinigung von Xerobromion, Mesobromion und Violion calaminariae in einem Bromion-Verband stellen sich deshalb zahlreiche Schwierigkeiten entgegen. Eine solche Zusammenfassung kann angesichts der großen Verschiedenheiten nur mit Zwang vorgenommen werden, weshalb wir auch hier davon absehen*" [A combination of *Xerobromion*, *Mesobromion* and *Violion calaminariae* within a *Bromion* alliance therefore faces numerous difficulties. In view of the great differences, such a pooling can only be done with force, which is why we refrain from doing it here]. Although Zoller (1954a) did not explicitly say that *Xerobromion* and *Mesobromion* are two separate alliances, it should be noted that he wrote in the indicative ("... they can not be combined in one higher unit"). If he would not be affirmative about having two different alliances, he would have used the conditional (e.g., "... they should perhaps not be combined in one higher unit"). Moreover, the two syntaxa are consistently treated as well separated objects throughout Zoller's work, as is particularly clear from the table of contents (pp. 3–6).

In addition to having the *Xerobromion* and the *Mesobromion* as two separate alliances, Zoller (1954a, p. 38) also wrote that he refrained from classifying the numerous *Bromus erectus* meadow associations of the Swiss Jura in the higher units of the Braun-Blanquet sociological system, referring to a previous article (Zoller 1954b): "*Wenn wir auf eine Einordnung der zahlreichen, im Schweizer Jura vorkommenden Assoziationen der Bromus erectus-Wiesen in die höheren Einheiten des soziologischen Systems von Braun-Blanquet verzichten, so stellt sich an dieser Stelle die wichtige Frage, wie wir sonst eine folgerichtige Eingliederung dieser Rasen in die Vegetation Europas erreichen. Die Lösung dieser Probleme wurde schon früher eingehend besprochen. Ich verweise hier auf die ausführlicheren Erörterungen in der arealtypischen Arbeit* (Zoller 1954, S.39ff.),..." [If we refrain from classifying the numerous associations of the *Bromus erectus* meadows occurring in the Swiss Jura in the higher units of the sociological system of Braun-Blanquet, then the important question arises how we can otherwise integrate these meadows into the vegetation of Europe in a coherent way. The solution to this problem has already been discussed in detail. I refer here to the detailed discussion in the chorological work.]. In that work, Zoller (1954b, p. 39) claimed to have refrained from using a hierarchical sociological system of classification ("*Ich sehe deshalb bewußt ab von einer konsequenten Einordnung der verschiedenen Typen der Trockenwiesen in das hierarchisch soziologische System mit Ordnungen und Klassen analog der Sippensystematik, wie es heute zwar von vielen Autoren angestrebt wird*" [I therefore deliberately refrain from classifying the various types of dry meadows consistently in the hierarchical sociological system with orders and classes in analogy to the taxonomy of species, as many authors aim today]).

However, Theurillat et al. (2017, p. 385) observed that, although Zoller (1954a) explicitly refused to consider the "*Xerobromion*" and the "*Mesobromion*" as two suballiances of the *Bromion*, he nevertheless mentioned "*Xerobromion*-Unterverbandscharakterarten" [characteristic species of the suballiance *Xerobromion*] in his tables 1 and 2 to indicate such species in accordance with Braun-Blanquet and Moor (1938). Therefore, it could be argued that Zoller did not formally accept the two names *Xerobromion* and *Mesobromion* at the new rank since he did not formally wrote it, besides questioning the higher ranks of order and class of the syntaxonomic scheme, as mentioned above.

In conclusion, on the one hand, when Zoller said that the *Xerobromion* and the *Mesobromion* do not belong to the same alliance *Bromion*, he implicitly stated that they are two separate alliances. On the other hand, Zoller did not formally say that the *Xerobromion* and the *Mesobromion* are two separate alliances, and he mentioned "characteristic species of the suballiance *Xerobromion*" in two tables. Therefore, a binding decision is requested whether the two names are clearly adopted or not (Art. 3b) by Zoller.

Author contributions

All the authors contributed to the nomenclature research and critically revised the manuscript.

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